

ANNOTATIONES ZOOLOGICAE JAPONENSES

Volume 43, No. 1—March 1970

Published by the Zoological Society of Japan
Zoological Institute, Tokyo University

Helminth Fauna of Bats in Japan VI

With 4 Text-figures

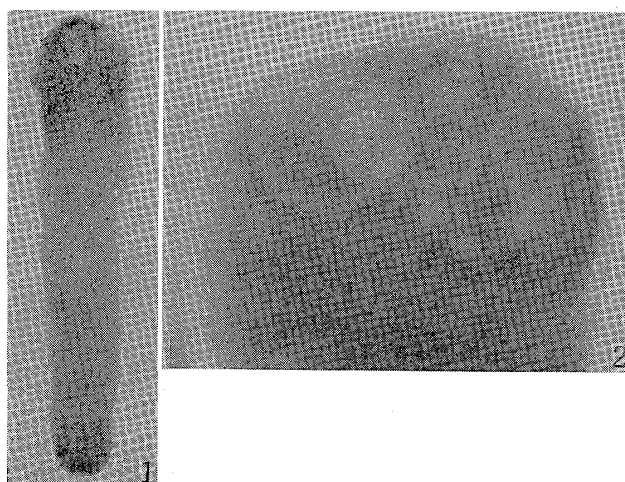
Isamu SAWADA

Biological Laboratory, Nara University of Education, Nara 630, Japan
(Communicated by T. UCHIDA)

ABSTRACT Two species of hymenolepid tapeworms have been recorded o Japanese bats, with the description of a new species, *Hymenolepsis subrostellata* n. sp.

Hymenolepis grisea (Beneden, 1873)
(Figures 1 and 2)

On March 6, 1969, two specimens of the large common bat, *Rhinolophus ferrumequinum*, two individuals of the common bat *Miniopterus schreibersi* and two specimens of the small bat *Rhinolophus cornutus* were collected by Mr. Kuramoto in a lime grotto at Akiyoshidai in Yamaguti Prefecture and these specimens were forwarded to the author to examine parasites of these hosts. As the result, each



Figs. 1-2. *Hymenolepis grisea*.

Fig. 1. Total larval strobila ($\times 55$).

Fig. 2. Scolex ($\times 360$).

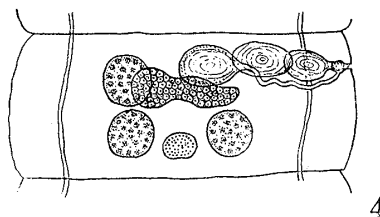
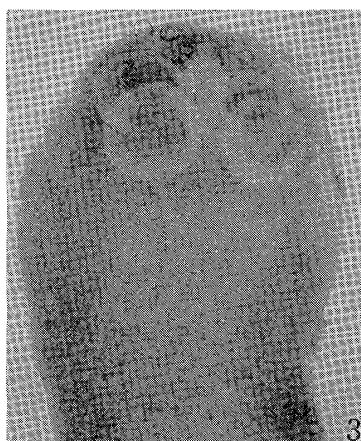
specimen of *Rhinolophus ferrumequinum* was infected with two nematodes and many of very small tapeworms, one individual of *Miniopterus schreibersi* with many of trematodes and one specimen of *Rhinolophus cornutus* with many of trematodes. Since these specimens of tapeworms examined were not fully mature no oncospheres were determined. But from the morphology of scolex and the total strobila, these specimens have been identified with *Hymenolepis grisea* (Beneden, 1873).

Description: *Hymenolepis* Weinland, 1858. Larval strobila 0.968 to 1.595 mm in length. Scolex 0.221 to 0.249 mm wide and 0.346 to 0.415 mm long. Neck 0.124 to 0.152 mm wide. Suckers unarmed, 0.083 mm in diameter. Rostellum slightly development, 0.088 mm long by 0.042 mm wide.

Hymenolepis subrostellata n. sp.
(Figures 3 and 4)

Nine individuals of the common bat, *Rhinolophus ferrumequinum* and a small bat *Rhinolophus cornutus*, were collected in a lime grotto, Oninowaya, at Taishakukyo in Hiroshima Prefecture on July 28, 1969. Four of nine specimens of *Rhinolophus ferrumequinum* were infected with one to six tapeworms, a specimen of *Rhinolophus cornutus* with two trematodes, but no nematodes were found in them. These specimens of tapeworm belong to the genus *Hymenolepis* Weinland, 1858 and appear to form a new species.

Description: Strobila length 21 to 28 mm, maximum width 0.55 to 0.64 mm, attained in gravid proglottides. Margins of proglottides not serrat. Scolex 0.318 to 0.401 mm in width and 0.443 to 0.553 mm in length. Suckers, unarmed, 0.098 to 0.116 mm by 0.116 mm. Rostellum slightly development, unarmed, 0.056 to 0.070 mm by 0.119 to 0.123 mm. Neck 0.207 mm wide and 0.553 mm long. Genital pores unilateral, situated in anterior half of proglottid margin. Cirrus sac



Figs. 3-4. *Hymenolepis subrostellata* n. sp.

Fig. 3. Scolex ($\times 150$).

Fig. 4. Mature proglottid ($\times 100$).

small, not reaching longitudinal excretory canal, 0.021 mm long by 0.014 mm wide. External and internal seminal vesicles both prominent; the former 0.049 to 0.070 mm by 0.032 to 0.046 mm, the latter 0.028 mm by 0.049 to 0.056 mm. Semianl receptacle prominent in mature proglottides, 0.028 to 0.035 mm by 0.063 to 0.070 mm. Ovary 0.039 mm by 0.105 mm, transversely elongated, located anterior half field of proglottid. Vitelline gland situated posterior to ovary, 0.035 mm by 0.053 mm. Testes, three in number, ovoid, 0.042 to 0.053 mm by 0.049 to 0.065 mm, arranged in form of triangle with one testis poral and two aporal. Uterus extends as a slender irregular tube transversely, passing dorsal to excretory canals and extending beyond them. Eggs sperical, 0.039 mm by 0.056 mm. Onchospheres, 0.025 mm by 0.032 mm; embryonal hooks 0.007 mm in length.

Discussion: The present species closely resembles *Hymenolepis parvus* Sawada, 1967 from *Rhinolophus ferrumequinum*, however, it distinctly differs in the width of scolex, the situation of suckers in the scolex, the size and the shape of rostellum and the length of embryonal hooks.

Host: *Rhinolophus ferrumequinum*

Habitat: Small intestine

Locality and Date: Taishakukyo, Hiroshima Prefecture; July 28, 1969

Type specimen: Biological Laboratory, Nara University of Education, Nara, Japan

ACKNOWLEDGEMENT

Thanks are due to Mr. Kuramoto, Akiyoshidai Science Museum, for collecting the bats in the cave.

REFERENCES

- Sawada, I., 1967. Annot. Zool. Japon., **40**, 61.
Van Beneden, 1873. Mèm. Ac. Sc. de Belgique, **40**, 1.